

Work Order ID 158253

Thursday, March 16, 2017 10:28:19 AM

158253

Page 1

Item ID: D105-674-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017 Start Qty: 1.00

1

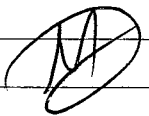
Cust Item ID:

Required Date: 3/30/2017 Req'd Qty: 1.00

1

Customer:

Reference: SCHEDULED

Approvals: Process Plan: 

Date: MAR 16 2017

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2966	Rev B

100

Document Control

0.00

100

DC

DOCUMENT CONTROL

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D105-674-011 CHG004

DAS
6
9-89

APR 13 2017

DAS
27
9-89

APR 13 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ * Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

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N900040100

Setup Start

NS1

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Stop

NS2

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Start Date: 3/20/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/30/2017 Req'd Qty: 1.00

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Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

0.00

130

Skidtubes

Skidtubes

Memo

0.88

** Pull D2966-1bent **

1- Cut Aft end as per dwg, remove bending marks and deburr ends. Scribe batch#.

2- Drill Aft Cap holes using DT8678, do not open to finished size.

3- Locate from aft caps pilot holes, install DT9982 pilot drill all crossbolt holes.

4- Clamp DT8679 to the tube. Drill all wearplate holes to 0.297". Open two side holes (1 per side) located at 8.89" from aft to 0.297". Deburr.

5- Open Aft Cap holes as per dwg

6- Two most fwd crossbolt holes must be laid out manually. ***VERIFY MEASUREMENTS BEFORE DRILLING. USING DT9937 AND DT9938

1 0 1703-20

140

0.00

140

Skidtubes

Skidtubes

Memo

0.63

1-Weld Fwd Cap as per Dwg D2966 and QSI 004.

2-Grind Fwd Cap welds flush

1 0 1703-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																																			
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158253

Page 3

Item ID: D105-674-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/30/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo	0.02							
Quality Control									
160	QC10- Inspect visual per QSI004- ground welds	0.00							
160									
QC	Memo	1.10							
Quality Control									
170	Chemical Conversion Coat per QSI005 4.1	0.00							
170									
HandFinish	Memo	0.09							
Hand Finishing									

38
9-00
MAR 21 2017DAS
38
9-00
MAR 21 2017(X1) 20170312
BEB.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
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1 0 17-03-20 ^{2E}

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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OTHER :									

Work Order ID 158253

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158253

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Item ID: D105-674-011 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black
 Start Date: 3/20/2017 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 3/30/2017 Req'd Qty: 1.00 ***1*** Customer:
 Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Skidtubes	0.00							
200									
Skidtubes	Memo	1.00							
Skidtubes	1-Bond Web in place per QSI 015. (Ensure holes line up) Pick: A/R Sikaflex-291 batch: <u>136652</u> Sikaflex expiry date: <u>7 DEC 2017</u> start time: _____ end time: _____								<u>BE17-03-21</u>
	2-Weld Crossbolt Spacers as per Dwg D2966 and QSI 004. A/R Aluminum Rod batch: <u>M136158</u>								<u>7 BE17-03-22</u>
	3-Grind welds flush as per Dwg D2966								
210	QC10- Inspect visual per QSI004- ground welds	0.00							
210									
QC	Memo	0.00							
Quality Control									

DAS
33
9-89

MAR 23 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/30/2017 Req'd Qty: 1.00

1

Customer:

Reference: SCHEDULED

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Memo

0.02

Quality Control

DAS
33

9-89

MAR 23 2017

225

Pressure Wash per QSI005 4.3

0.00

225

HandFinish

Memo

0.67

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 (Do not acid etch.)

(X1)

✓

201703/27

BEB.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

DQA:

Date:

2017-05-25



QA Closed:

Date:

APR 18 2017

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only



Work Order: <u>158253</u> Part No. <u>D105-674-011</u> NCR No.		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☒ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐					
Date: <u>17/4/12</u>		Step #: <u>230</u>		QTY Effective: <u>1</u>			MRB (QSI042) Approval DAS 12 9-89 <u>17/4/12</u>		
Description Work Order Deviation				Disposition				Completed By	
Requires powder coat cut to spec production				Acceptable to powder coat black per QSI 005 4.3 No wing work.				<u>1704-B BK</u>	
								Lead hand / Supervisor Approval Verification DAS 9 9-89 <u>17-04-13</u>	
								QC / QA Coordinator Approval DAS <u>17-04-13</u>	
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Crushing ☐ Countersink ☐ Off-set ☐ Heat Treat ☐ Cut Too Short ☐ Mislabeled ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐				9-89 Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER: ☐									

Work Order ID 158253

Thursday, March 16, 2017 10:28:19 AM

158253

Page 8

Item ID: D105-674-011 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black
Start Date: 3/20/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/30/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	HandFinishing	0.00							
250	HandFinish	1.53				1	0	17-04-13	23 34 389
Hand Finishing	Memo								
	1-Inspect for foreign objects as per QSI 024								
	2-Install Inserts, Wearplate and Cap per Dwg D2966. Insert a drop of sikaflex at insert holes before installing wearplates. Seal Aft Cap using Sikaflex. Install bushing and nut. By looking Fwd, install nut to right hand side.								
	Pick:								
	QtyPart NumberDescriptionBatch								
	A/RSikaflex-291 137124								
	Sikaflex expiry date: 17-09								
	3-Wing Walk as per Dwg D2966 and QSI 005 4.4								
	Batch: _____								
260	QC3- Inspect Part Finish	0.00							
260	QC	0.01				1	0	17-04-13	DAS 9 9-89
Quality Control	Memo								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 158253

Thursday, March 16, 2017 10:28:19 AM

158253

Page 9

Item ID: D105-674-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/30/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

270

QC5- Inspect part completeness to step on W/O

0.00

270

QC

Memo

0.02

Quality Control

*****ENSURE INSERTS ARE AT LOCATION (6) AS PER DWG
D2966*****

① 17-04-13 30

280

Pick Kit

0.00

280

Packaging

Memo

0.00

Packaging

DAS
27
9-89
APR 13 2017**P.T.O.**

290

QC4- 100% Inspect kits for completeness

0.00

290

QC

Memo

0.03

Quality Control

DAS
27
9-89
APR 13 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 158253

Thursday, March 16, 2017 10:28:19 AM

158253

Page 10

Item ID: D105-674-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 3/30/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference: SCHEDULED

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
300	Packaging	0.00							
300									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D105-674-011 Location:FG071								
310	QC21- Final Inspection - Work Order Release	0.00							
310									
QC	Memo	0.10							
Quality Control									

DAS
27
APR 9 2017DAS
21
9-09
APR 13 2017DAS
21
9-09

APR 13 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																								
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Misidentified ☐	Past Due ☐																																																																															
OTHER : ☐																																																																																

Picklist Print

Thursday, March 16, 2017 10:28:24 AM

Page 1

Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A04.07.07New IssueKJ/JLM IPP revB 10.02.22
per PAR 09-043 EC verified by: DD IPP Rev C 10.09.17 added
D2966-1-bent EC verified by DD IPP REV:D 13.04.08 AS PER ECN 13-
510 DD VERF:JLM IPP REV:E 14.02.05 as per dwg D2966 rev.b
DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2966-1-BENT		Manufactured	No			130	Each	4.0000	1	1			
--------------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

D2966-1-BENT ✓

Skidtube Assembly 105

BE1703-17

Location	Loc Qty	Loc Code
----------	---------	----------

LG002

4

110727

2

140835

2

D2964		Manufactured	No			140	Each	9.0000	1	1			
-------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

D2964

Cap

BE1703-20

Location	Loc Qty	Loc Code
----------	---------	----------

LG001

9

153488

3

158161

6

D2976		Manufactured	No			200	Each	14.0000	1	1			
-------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

D2976

Bo 105 Skidtube I Beam

BB 170321

Location	Loc Qty	Loc Code
----------	---------	----------

LG002

14

112439

8

113150

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 2

Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

D2971 Manufactured No 200 Each 36.0000 1 1

D2971

Cross Bolt Spacer

BE1703-22

Location

Loc Qty

Loc Code

LG001

36

155918

36

1

D2973 Manufactured No 200 Each 48.0000 7 7

D2973

Cross Bolt Spacer

BE1703-22

Location

Loc Qty

Loc Code

LG001

48

123939

2

144627

46

7

D2965 Manufactured No 250 Each 43.0000 1 1

D2965

Cap

17-04-13 BR

Location

Loc Qty

Loc Code

FP001

43

127852

43

1

D2970-1 Manufactured No 250 Each 2.0000 1 1

D2970-1

Wearplate Fwd

17-04-13 BR

Location

Loc Qty

Loc Code

FP002

2

125753

2

1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
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Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Picklist Print

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Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

D2970-3 Manufactured No 250 Each 13.0000 1 1

D2970-3

Wearplate Center

17-04-13 BK

Location	Loc Qty	Loc Code
FP002	13	
125323 ✓	1	
128917	12	

D3176-1 Manufactured No 250 Each 16.0000 1 1

D3176-1

Bushing

17-04-13 BK

Location	Loc Qty	Loc Code
ST020	16	
108637	8	
95511 ✓	8	

D3176-3 Manufactured No 250 Each 17.0000 1 1

D3176-3

Nut

17-04-13 BK

Location	Loc Qty	Loc Code
ST020	17	
108638 ✓	17	



Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____			DISPOSITION Rework Scrap Use-as-is Suspected Unapproved		AGAINST DEPARTMENT/PROCESS Skid-tube Machining Thermoforming Large Fab Cross tube Small Fab Finishing Composite Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier Engineering Quality Other						
Date :		Step #:			QTY Effective :			MRB (QSI042) Approval			
Description Work Order Deviation					Disposition						
										Completed By	
										Lead hand / Supervisor Approval Verification	
										QC / QA Coordinator Approval	
Root Cause Environment Design Doc/Data Equip/Tooling Handling/Pre Material Internal Transport Tribal Knowledge LOA Substation Past Expiry Date Misidentified No Re-verification Operator Offset/Setup Supplier Training Use for Testing Poor Information Rushing Product Improvement Process Improvement Manufacturing Process Past Due					FAULT CATEGORY Pressure/Forced Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Wave/Twist in Tube Marks/Chatter Temperature/Cure Set-up BOM/Route Broken/Damage/Defect Inspection Incomplete/Unqualified Contamination Countersink Cut Too Short Instructions Incomplete/Unclear Drill Holes Power Loss/Surge Folio/Program Grain Weld Wrong Stock Pulled Out of Sequence Off-set Mislabeled Fit/Function Misaligned/off center Positioned Wrong Outside Dimensions Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Drawing Finish Misread Turning Sequence						
OTHER :											

Picklist Print

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Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130 AELS8-1032-130 Purchased No

250 Each 2,805.000 36 36

ALS7-1032-130

Rivnut

17-04-13 BL

~~ALS4-1032-130~~

m 135442

Location

Loc Qty

Loc Code

FG

m 136579

100

M128649

50

M136048

50

FP001

2455

M128649

155

M136579

2300

ST556

250

M136048

250

NAS1149D0332J Purchased

No

250 Each 824.0000 28 28

NAS1149D0332.J

Washer

17-04-13 BL

Location

Loc Qty

Loc Code

FP

137075

38

m136015

38

GA

534

m136643

534

ST264

252

m136015 ✓

252

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Shop Packet Print

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

250

Each

295.0000

26

26

MS27039-1-08

Screw

17-04-13. BL

Location

Loc Qty

Loc Code

FP001

202

m136047

202

GA

89

m128636

89

ST281

4

m136047 ✓

4

26

MS27039-1-09

Purchased

No

250

Each

123.0000

2

2

MS27039-1-09

Screw

17-04-13. BL

Location

Loc Qty

Loc Code

FP001

32

180571 ✓

32

GA

50

124859

50

ST280

41

m135056

41

2

D2972

Manufactured

No

290

Each

19.0000

6

6

D2972

Bushing

APR 13 2017

DAS

6

9-89

Location

Loc Qty

Loc Code

ST014

19

110766

19

6

DAS
27
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Picklist Print

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Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

D2974

Manufactured No

290

Each

11.0000

1

1

D2974

Packer Wearplate Aft

**

DAS

6

9-89

APR 13 2017

Location

Loc Qty

Loc Code

ST014

11

126270

11

D2975

Manufactured No

290

Each

3.0000

2

2

D2975

Wearplate

**

DAS

6

9-89

APR 13 2017

Location

Loc Qty

Loc Code

ST610

3

125245

1

126271

2

AN4-51A

Purchased

No

290

Each

96.0000

3

3

AN4-51A

Bolt

**

DAS

6

9-89

APR 13 2017

Location

Loc Qty

Loc Code

FG

5

122993

5

over003

50

m136851

50

SR340

41

m136643

41

DAS

27

9-89

Thursday, March 16, 2017 10:28:24 AM

Shop Packet Print

Page 6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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Picklist Print

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Work Order ID: 158253

158253

Parent Item: D105-674-011

D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0332J

Purchased

No

290

Each

824.0000

8

8

NAS1149D0332.J

Washer

AN9605DIOL

DAS
27
9-89

MS21042L4

Purchased

No

290

Each

1,539.000

3

3

MS21042L4

Nut

DAS
27
9-89

Location

Loc Qty

Loc Code

FP	38	
m136015	38	
GA	534	
m136643	534	
ST264	252	
m136015	252	

**

APR 13 2017

DAS
6
9-89

137065

Location

Loc Qty

Loc Code

FP001	10	
m133363	10	
GA	183	
m135058	183	
OVER007	500	
m136986	500	
ST303	846	
m136450	500	
m136838	346	

**

APR 13 2017

DAS
6
9-89

3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
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D105-674-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH, Matte Black

Start Date: 3/20/2017

Required Date: 3/30/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

290

Each

295.0000

8

8

MS27039-1-08

Screw

DAS
6
9-89

APR 13 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

202

m136047

202

GA

89

m128636

89

ST281

4

m136047

4

DQA: _____ Date: _____

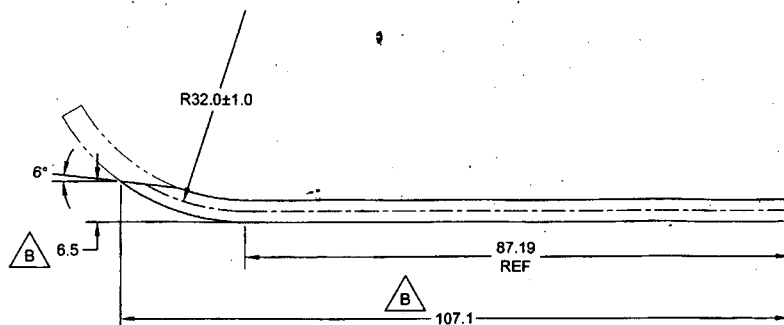


WORK ORDER NON-CONFORMANCE / UPDATE

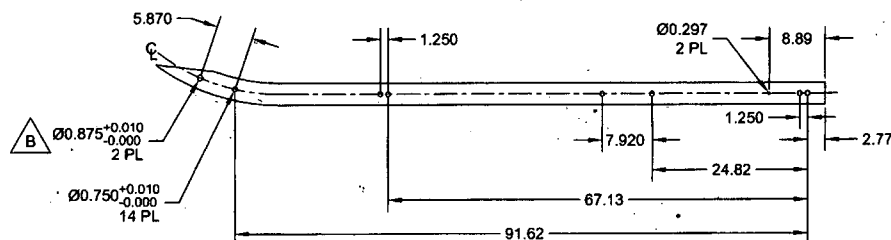
QA Closed: _____ Date: _____

Work Order update only ☐

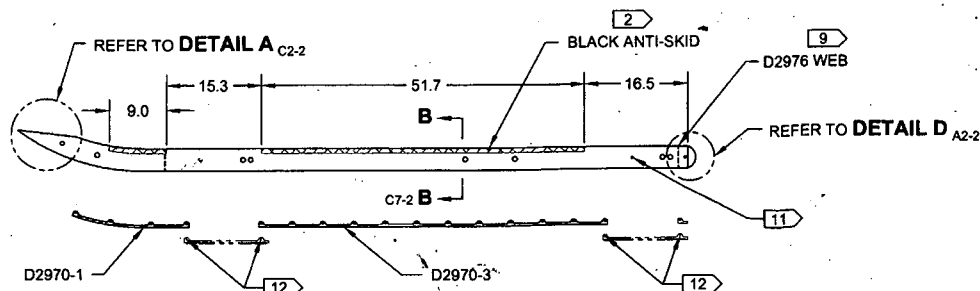
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OTHER : _____					



D2966-1 BENDING/CUTTING DETAIL
(MAKE FROM D2962-125 EXTRUSION)



D2966-1 DRILLING DETAIL



D2966-041 ASSEMBLY DETAIL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158253
MAR 16 2017

NOTES:

- 1) MATERIAL: MAKE D2966-1 FROM D2962-125 EXTRUSION (INITIAL LENGTH = 125.0)
- 2) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2976 WEB.
STANDARD: PRIME (REF. 4.2.1.3.2) AND PAINT MATTE BLACK PER DART QSI 005 4.2
OPTIONAL: POWDER COAT BLACK SANTEX (REF. 4.3.5.7) PER DART QSI 005 4.3
OPTIONAL: BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS STATED OTHERWISE
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 18 lb
- 8) WELDING: PER DART QSI 004
- 9) INSERT D2976 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 10) INSTALL ALS7-1032-130 AFTER FINISH PER SECTION B-B (34 PLACES). DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. SEAL WEARPLATE SCREWS WITH SIKAFLEX-241/-291.
- 11) INSTALL ALS7-1032-130 INSERT, MS27039-1-08 SCREW, AND NAS1149D0332J WASHER IN 2 PLACES THIS LOCATION BEFORE PRIME AND PAINT (OR POWDER COATING).
- 12) DO NOT INSTALL MS27039-1-08 SCREWS AND NAS1149D0332J WASHERS IN THESE LOCATIONS.

ITEM	QTY	PART NUMBER	DESCRIPTION
	X	D2966-041	SKIDTUBE AS
1	1	D2966-1	TUBE
2	1	D2964	CAP
3	1	D2965	CAP
4	1	D2970-1	WEARPLATE
5	1	D2970-3	WEARPLATE
6	1	D2971	CROSS BOLT SPACER
7	7	D2973	CROSS BOLT SPACER
8	1	D2976	WEB
9	1	D3176-1	BUSHING
10	1	D3176-3	NUT
11	36	ALS7-1032-130 or ALS4-1032-130 or AKS7-1032-130 or AKS4-1032-130	INSERT
12	26	MS27039-1-08	SCREW
13	2	MS27039-1-09	SCREW
14	28	NAS1149D0332J	WASHER

RELEASED
11 2016-02-03

B	UPDATE TO CURRENT STD; INCORP. REV. A1 AND A2. CHG COLOR TO BLACK SANTEX (ZN C3-1) AND ADD D3176-1/3 (ZN D3-1, C1-2). PRIME AND PAINT NOW STD WHILE POWDER COAT IS OPTIONAL (ZN C3-1); Ø0.875 WAS Ø0.750 (ZN B52-), Ø0.750 WAS Ø0.630 (ZN B6-2); TOL CHG (ZN D8-1 AND D6-1).	MB	13.12.02
A	NEW ISSUE	RF	00.03.08
REV.	DESCRIPTION	BY	DATE
DESIGN	1		
DRAWN	1		
CHECKED	1		
MFG. APPR.	1		
APPROVED	1		
DE APPR.	1		
DATE	13.12.02		

DART AEROSPACE USA, INC
KENT, WA
DRAWING NO. D2966
REV. B
SHEET 1 OF 2
TITLE BO 105 SKIDTUBE ASSEMBLY
SCALE NTS
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